

**CHIP LEVEL WAVEGUIDE SENSOR**

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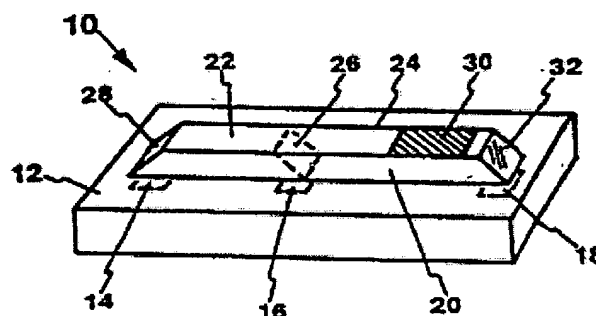
**Cited documents:**

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US5039490  
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US5165005  
US4872759

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**Abstract of WO9706422**

Waveguide sensors (10) are formed on a chip package (12) which contains at least one source (14) and at least one detector (16, 18). Simple waveguide elements (20) are mounted on the chip (12). Waveguide defining elements (22, 24) can also be formed integrally with the chip package (12) so that simple waveguide bodies can be inserted or removed. Various geometries of source (14), reference detector (16), and sensing detector (18) can be produced. A liquid waveguide sensor is formed by filling a waveguide channel with a liquid reagent or reagents homogeneously dispersed in sol-gels. Sensing waveguides are made of or contain chemistries or biochemistries (30) or are uncoated. Reference waveguides are made of or contain chemistries, biochemistries or materials which are inert to the analyte (sample) of interest. The chip geometries are such that absorption, fluorescence, and refractive index measurements can be made.



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